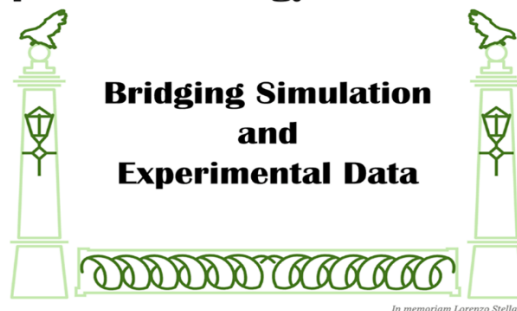


Peptides in Biology and Materials

2nd Edition
28th - 30th April 2026



Sofia University
Bulgaria

Program

Day 1 - Tuesday April 28th 2026

- 16:00 to 17:30 - Registration
- 17:15 to 17:30 - Welcome & Introduction

Opening session 17:30 to 18:30

Chairs: A. Ivanova, G. Bocchinfuso

- 17:30 to 18:00 - **Vittorio Limongelli**
Multiscale simulations of molecular binding reveal mechanisms of drug action
- 18:00 to 18:30 - **Elka Georgieva**
HIV-1 Vpu-host calmodulin complexes: Mechanisms and inhibition
- 18:30 – Welcome cocktail

Day 2 - Wednesday April 29th 2026

Membrane-peptide interactions 09:30 to 10:50

Chair: M. Melo

- 09:30 to 10:00 - **Burkhard Bechinger**
Phosphates drive the assembly of fibers made from the α -helical lentiviral transduction enhancer vectofusin
- 10:00 to 10:30 - **Alessandra Villa**
Molecular dynamics and experimental synergy to understand biomolecular behavior
- 10:30 to 10:50 - **Ana Carolina Borges Araújo**
Alamethicin pore formation in Martini 3 lipid membranes

- 10:50 to 11:20 – Coffee break

Therapeutics 11:20 to 12:30

Chair: G. Bocchini

- 11:20 to 11:40 - **Sara Carvalho**
Multi-peptide targeted lipid nanoparticles (tLNPs) for cell-specific delivery
- 11:40 to 12:00 - **Elena Lilkova**
SARS-CoV-2 NSP8-derived peptides can inhibit NSP13
- 12:00 to 12:20 - **Nuno Santos**
Development of a broad-spectrum peptide inhibitor of flaviviruses assembling and replication
- 12:20 to 14:00 - Lunch

Membrane-peptide interactions 14:00 to 15:20

Chair: M. Melo

- 14:00 to 14:30 - **Robert Vacha**
Translocation of Amphiphilic Peptides Across Cell Membranes
- 14:30 to 15:00 - **Marta De Zotti**
Bis-labeled helical Aib-peptides as reliable building blocks for spectroscopic and photoelectrochemical applications
- 15:00 to 15:20 - **Peicho Petkov**
Self-Association and Cooperative Assembly in Antimicrobial Peptide Solutions
- 15:20 to 16:00 – Coffee break

Peptide interactions 16:00 to 17:30

Chair: P. Calligari

- 16:00 to 16:30 - **Ana Pina**
Liquid-liquid phase separation-derived peptide coacervates as catalytic microenvironments
- 16:30 to 16:50 – **Luigi Vitagliano**
Characterizations of amyloid-like assemblies: the cases of transthyretin and low complexity sequences
- 16:50 to 17:10 – **Viktoria Milkova**
Aggregation of transthyretin in the presence of chitosan-based nanogels loaded with quercetin
- 17:10 to 19:00 - Poster session & drinks
- 20:00 to 23:00 - Social dinner

Day 3 - Thursday April 30th 2026

Therapeutics 10:00 to 10:50

Chair: P. Calligari

- 10:00 to 10:30 - **Daniela Roversi**
Antimicrobial peptides interaction with live cells: quantitative insights and future challenges
- 10:30 to 10:50 - **Anastas Pashov**
The IgOme as a Universal Biosensor: Peptide Mimotopes of the Public IgM Repertoire Across Diseases
- 10:50 to 11:20 – Coffee break

Peptide structure & design 11:20 to 12:30

Chair: A. Ivanova

- 11:20 to 11:50 - **Alena Khmelinskaia**
Function-driven design of protein assemblies
- 11:50 to 12:20 - **Diana Lousa**
Peptides in viral pandemics: From entry mechanisms to therapeutic strategies
- 12:20 to 12:30 - Concluding Remarks
- 12:30 to 14:00 - Lunch

Support



National Recovery and Resilience Plan



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